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DOCUMENTATION FOR THE MACHINE-READABLE VERSION
OF THE
GENERAL CATALOGUE OF TRIGONOMETRIC STELLAR PARALLAXES
AND SUPPLEMENT

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SECTION 1 - INTRODUCTION AND SOURCE REFERENCE

The *General Catalogue of Trigonometric Stellar Parallaxes* (Jenkins 1963) is a compilation of only trigonometric parallaxes determined from photographic plates. The 1963 edition of the catalogue is a reprint of an earlier edition (Jenkins 1952) containing parallax values received before June 1950, with the addition of a 1963 supplement containing all determinations available in December 1962. The machine-readable version of the catalogue contains the basic data of the 1952 edition, with the new absolute parallax values in Section I of the 1963 Supplement, plus the new stars in Section II. The miscellaneous corrections listed in Section III of the 1963 Supplement have been made. The data and remarks on the right-hand pages of the published catalogue are not included in this machine-readable version.

This document describes the machine-readable version of the catalogue as distributed by the Astronomical Data Center. It is intended to enable users to read and process the data without problems and guesswork. The source reference should be consulted for details concerning the compilation of the main catalogue and supplement, the probable errors, and the weighting system used to combine determinations from different observatories. A copy of this document should be supplied with any machine-readable copy of the catalogue.

SOURCE REFERENCE

Jenkins, L. F. 1963, *General Catalogue of Trigonometric Stellar Parallaxes* (New Haven: Yale University Observatory).

SECTION 2 - TAPE CONTENTS

A byte-by-byte description of the contents of the General Catalogue of Trigonometric Stellar Parallaxes is given in Table 1. The suggested format specifications are for FORTRAN formatted read statements and can be modified depending upon individual programming and processing requirements. Since data fields contain blanks where data are absent, care must be exercised when processing the catalogue for search or computational purposes, particularly for data which can have valid zero values. In this case, it is safest to buffer the data in or read them with character (A) format specifications and check for blanks before processing. Note that the additional decimal place for each star included from the Supplement is located at the end of a logical record rather than immediately following the star number. Alternate format specifications are given in parentheses.

Table 1. Tape Contents. General Catalogue of Trigonometric Stellar Parallaxes.

Byte(s)	Units	Suggested Format	Description
1- 4	---	I4	Sequential number by which the catalogue is ordered. Although the numbering system initially corresponded strictly to increasing right ascension, several RA corrections have destroyed the strict correspondence. There are also exceptions to the general rule of North to South ordering for stars having the same RA.
5-12	---	A3	Durchmusterung number (BD for zones +89° to -22°, CD for zones -23° to -51°, CPD for zones -52° to -89°). The sign is always in byte 5, the zone in bytes 6-7, and the number in bytes 8-12. The field is blank when no DM number is present.
13	---	A1	Suffix for DM number. Field contains a lower case "a" for two supplemental BD stars (Nos. 1624 and 4098 [Barnard's Star]) or an asterisk if a CD number is given south of the -51° zone (or CPD north of the zone), etc. Blank if no suffix present.
14-15	hours	I2	Right ascension (α) for epoch 1900.
16-18	min	F3.1	α

Table 1. (continued)

Byte(s)	Units	Suggested Format	Description
19-21	°	I3 (A1,I2)	Declination (δ) for equinox 1900. Sign always in byte 18.
22-23	'	I2	δ
24-27	mag	F4.1 (A4)	Visual or photographic magnitude (see byte 27). All actual magnitude data contain either a positive or negative sign in byte 23. If a magnitude is given as "var" or "nova" in the published catalogue, then byte 23 is blank and the value is set to 99.9 (nines in bytes 24-26). Note that lower precision data are indicated by the presence of a blank in byte 26.
28	---	A1	Magnitude code (V for visual, P for photographic, blank for 999 magnitudes).
29-31	---	A3	Spectral type from the Henry Draper Catalogue (HD). For many stars fainter than magnitude 6.5, Mount Wilson spectral types are reported; additional types were supplied by G. P. Kuiper and A. N. Vyssotsky. Blank if no data present.
32-37	---	I6 (A6)	HD number, otherwise blank.
38	---	A1	HD code. The digit 9 denotes that HD and HD+1 are taken together (when the entry represents two HD numbers, the HD number given is always the lower of the two). Otherwise zero.
39-47	---	9A1 (A9)	Source catalogues for proper motions following. The catalogue abbreviation (GC - Boss 1937, CI18 - Porter et al. 1915, CI20 - Porter et al. 1930, LT, LTT - Luyten 1957, 1961, 1962) and catalogue number are given. Blank if no data.
48-52	"	F5.3	Proper motion in right ascension (μ_{α}). Sign always in byte 46. Blank if no data.

Table 1. (continued)

Byte(s)	Units	Suggested Format	Description
53-58	"	F6.3	Proper motion in declination (μ_δ). Sign always in byte 51. Blank if no data. Note: The accuracy of the proper-motion data is indicated by the precision to which the data are reported, viz., for lower accuracy values, bytes 50 and 56 are blank. For GC stars, the motions are reported to a precision of three decimal places. For the Cincinnati and other catalogues, the motions are given to varying accuracy. When only μ_α is present, it has been determined from the parallax solution. When only the total μ is given in the published catalogue, the proper-motion fields are blank.
59-62	"	F4.3	The adjusted absolute trigonometric parallax (π). The field is blank in cases where the same star has multiple records and the record is not the first (see byte 63).
63-64	"	F2.3	The adjusted probable error of the parallax. Blank when the π field is blank.
65	---	I1	When there are multiple records in the catalogue for additional components of multiple stars, each component (including the first) is numbered sequentially (1, 2, ...) in this byte.
66	---	I1	Stars from the supplement are numbered with the 1952 catalogue number after which the star has been inserted (in α order) plus an additional decimal place, e.g. star 16.1 has been inserted after star 16. Byte 64 contains the additional digit. If the catalogue is to be sorted back to the original order after being ordered in some other way, this byte should be the secondary sort field. Blank for stars in the original 1952 edition.

SECTION 3 - TAPE CHARACTERISTICS

The information contained in Table 2 is sufficient for a user to describe the indigenous characteristics of the machine-readable *General Catalogue of Trigonometric Stellar Parallaxes* to a computer. Information easily varied from installation to installation, such as block size (physical record length), blocking factor (number of logical records per physical record), total number of blocks, tape density, number of tracks, and internal coding (EBCDIC, ASCII, etc.) is not included. This information should always be supplied if secondary copies are transmitted to other users or installations.

Table 2. Tape Characteristics. *General Catalogue of Trigonometric Stellar Parallaxes*.

NUMBER OF FILES	1
LOGICAL RECORD LENGTH (BYTES)	66
RECORD FORMAT	FB*
TOTAL NUMBER OF LOGICAL RECORDS	6675

* Fixed block length (last block may be short)

SECTION 4 - REMARKS, MODIFICATIONS, ACKNOWLEDGMENTS AND REFERENCES

The General Catalogue of Trigonometric Stellar Parallaxes was received on magnetic tape from Dr. P. K. Seidelmann of the U.S. Naval Observatory (USNO) on 5 May 1982. The Supplement stars had been merged into the data file after being punched at USNO. The following modifications were made to the data file in order to make it easier to process and more uniform with respect to other machine-readable catalogues:

1. Preceding zeroes were removed from all sequential catalogue numbers.
2. Blank bytes in the proper-motion and magnitude code fields were filled with minus signs. These were changed to blanks where appropriate.
3. The catalogue had been recorded in O26 character code. It was converted to O29 by changing all & characters to + signs.
4. The 999 digits were added to the magnitude fields previously containing the words "var" and "nova." (The fields were previously blank.)
5. The μ data field for star 4098 (originally bytes 51-55) was coded A027 to represent +1027 (= +10.27) because the field was too small. The data field was therefore increased from five to six bytes (now 53-58) and the correct value inserted.
6. The logical record length was changed from 80 bytes to 66 bytes. Bytes were added to accommodate the DM suffix (byte 13) and the HD code (byte 38).

Individual corrections were made for stars 60 (data misalignment), 4494 record 2 (photographic magnitude omitted--added from published catalogue), 5470 (α changed from 22+20 to 22320) and 96.1 (spurious "0" removed from spectral type).

In addition, corrections to fourteen stars, kindly supplied by Dr. W. F. van Altena of Yale University, to whom the catalogue had also been sent, were made. The corrections involved data misalignment, incorrect Supplement digits, and record reversal (stars 298.2, 386.2, 1152.1, 1213.1, 1216.2, 1393.2, 1470.1, 1476.1, 1477.1, 1794.2, 3198.2, 3249.0, 3251.0 and 3256.2, where the zero indicates a non-Supplement star). Corrections by Hoffleit (1982) were also made; the latter corrections included the deletion of two duplicate entries (4728 and 4426.1).

ACKNOWLEDGMENTS

Appreciation is expressed to P. K. Seidelmann for supplying the updated version of the machine-readable catalogue, to W. F. van Altena for transmitting the corrections found at Yale, and to D. Hoffleit for checking some of the corrections in her published list and supplying additional corrections discovered more recently.

REFERENCES

- Boss, B. 1937, *General Catalogue of 33342 Stars for the Epoch 1950*
(Washington: Carnegie Institution of Washington).
- Hoffleit, D. 1982, *CDS Inform. Bull. No. 22*, p. 112.
- Jenkins, L. F., 1952, 1963, *General Catalogue of Trigonometric Stellar Parallaxes* (New Haven: Yale University Observatory).
- Luyten, W. J. 1957, *A Catalogue of 9867 Stars in the Southern Hemisphere with Proper Motions Exceeding 0".2 Annually* (Minneapolis: Lund Press).
- Luyten, W. J. 1961, *A Catalogue of 7127 Stars in the Northern Hemisphere with Proper Motions Exceeding 0".2 Annually (LTT 10001-17027)* (Minneapolis: Lund Press).
- Luyten, W. J. 1962, *First Supplement to the LTT Catalogues (LTT 17028-18635)* (Minneapolis: Lund Press).
- Porter, J. G., Yowell, E. I. and Smith, E. 1915, *Publ. Cincinnati Obs.* 18, 1930, 30.

SECTION 5 - SAMPLE LISTING

The sample listing given on the following pages contains logical data records exactly as they are recorded on the tape. Groups of records from the beginning and end of the catalogue are illustrated. The beginning of each record and bytes within the record are indicated by the column heading index across the top of each page (digits read vertically).

TAPE FILE NAME: YALE PARALLAX W/SUPPL.

RECORDS 1 TO 30

TAPPE FILE 29 67

SEALB 99 MGMT RECORD

INPUT VOLSER ADC001

CHIT
OREN
LAU
UDE
NIX
LIN
G

[illegible]

RECORD	1	1+0705128	00002+0814+0824K0	0000260GC61	+0251-	0058+00005
RECORD	2	2-0606357	00002-0616+0474K0	0000280GC59	-0016+	0096+00910
RECORD	3	3-6803597	00002-6822+0874K0	0000550C120,5	-016-	058 +07208
RECORD	4	4+4504408	00004+4516+0804K6	0000380GC71	+0874-	0131+091041
RECORD	5	4+4504408	00004+4516+0904K6	0000380GC72	+0874-	0193
RECORD	6	4+4504408	00004+4516+0994K1			3
RECORD	7	5-5212254	00007-5251+109P		+027 +	015 +02112
RECORD	8	6+1705036	00008+1731+0954K0	0001130GC81	-0170-	0139+005061
RECORD	9	6+1705036	00008+1731+0974K0	0001130		2
RECORD	10	7+5702865	00010+5753+0614G5	0001230GC88	+0261+	0034+04304
RECORD	11	8-4914337	00011-4938+0504G0	0001420GC92	+0560-	0037+04307
RECORD	12	9+2804704	00014+2828+0624K0	0001664GC95	+0376-	0180+06905
RECORD	13	9-2106537	00017-2139+1104G5	0002020LT42	-027 -	042 -001091
RECORD	14	10+8500412	00022+8614+0924G0	0002450	+034 -	002 +01109
RECORD	15	11-2400008	00024-2423+0804G0	0002830GC109	+0334+	0674+03612
RECORD	16	12+2800004	00032+2832+0224A0P0003580GC127		+0134-	0161+02805
RECORD	17	13+3500008	00035+3604+0614P5	00040000GC131	-0105-	0145+04606
RECORD	18	14+6500003	00036+6554+0824G5	0004040GC139	+0173+	0032+01711
RECORD	19	15+78000031	00038+7910+0624A3	0004310GC149	+0104-	0023-00109
RECORD	20	16+5900003	00038+5836+0244P5	0004320GC147	+0511-	0178+07207
RECORD	21	16-2700016	00039-2741+120P4	LT58	+078 +	015 +051081
RECORD	22	17+6400003	00040+6431+0704K0	0004430GC152	+0276+	0049+03108
RECORD	23	18-2800016	00043-2833+0554P2	0004930GC155	+0065-	0001+01710
RECORD	24	19-4600018	00043-4618+0394K0	0004960GC158	+0124-	0179+05911
RECORD	25	20+4500017	00051+4531+0514P0	0005710GC169	+0000-	0001-00608
RECORD	26	21+5700016	00052+5756+0814A	0005830	-015	-00711
RECORD	27	22+7300004	00059+7356+0714K0	0006780GC189	+0071-	0013+00810
RECORD	28	23+2900014	00062+2954+0874G5	0006910GC191	+0193+	0047+03106
RECORD	29	24-1500017	00062-1601+0504P5	0006930GC190	-0082-	0263+06016
RECORD	30	25-3900031	00065-3947+110P		+071 -	008 +02208

ORIGINAL PAGE IS
OF POOR QUALITY

[illegible]

Tape File Name: YALE PARALLAX W/SUPPL.

TAPZ FILE 29

10036Y 235704 10036Y

SECRET

RECORD	6646	5796-1706856	23542-1730+090VG6	2246180CI20,1467+119-	006+02408
RECORD	6647	5797-2006684	23543-2035+074VG8	2246190GC33265	+0508-0297+03207
RECORD	6648	5798-5014095	23545-5023+095VG0	2246520CI20,1469-003-	042+00408
RECORD	6649	5799+7600944	23547+7645+032VA0	2246680GC33277	+0015-0016+00411
RECORD	6650	5800+1905185	23550+1929+092VG0	GC33283	-0206-0201-00414
RECORD	6651	5801-1206598	23558-1223+085V	2248170CI20,1471+041-	007+00304
RECORD	6652	5801+1305195	23561+1324+102VH0		+001+016+0321111
RECORD	6653	5801+1305195	23561+1324+109VH0		+002
RECORD	6654	5802-5113743	23562-5054+054VHA	2248650GC33312	-0003+0014+00312
RECORD	6655	5803-7701596	23564-7737+047VK0	2248890GC33321	-0055-0166+01110
RECORD	6656	5804-2616876	23567-2621+092VA6	2249270CI18,3156-015-	038+00811
RECORD	6657	5805	23568+2528+110VK3	CI20,1472-030-	061+03912
RECORD	6658	5806-0606345	23568-0634+047VH8	2249350GC33330	+0048-0033+00706
RECORD	6659	5807+2604734	23569+2633+050VG0	2249300GC33334	+0837-0988+08604
RECORD	6660	5908	23570-4342+128PL5	CI20,1474+062-	060+12007
RECORD	6661	5809	23571+3852+105V		+020+000-01113
RECORD	6662	5810+3805114	23571+3851+059VP8		-014+000+09112
RECORD	6663	5811+0104820	23576+0135+077VG0	2250280	+004-007+01907
RECORD	6664	5812-2910946	23585-2857+080VGS	2251140	+026-015+00713
RECORD	6665	5813-1806417	23586-1754+046VA0	2251320GC	23+0021-0004+00410
RECORD	6666	5813	23592+5731+103VK2	CI20,1	+044-004+003101
RECORD	6667	5818-4714785	23593-4738+089VK0	2252080	+030+004+00012
RECORD	6668	5815-1106194	23594-1104+052VK2	2252120GC	36-0010-0005+01209
RECORD	6669	5816+6601673	23595+6637+050VK0	2252160GC	39+0093+0035+01405
RECORD	6670	5817-3715492	23595-3751+084VH4	2252130GC	49+5645-2332+21908
RECORD	6671	5818	23596+3412	999 G	-02812
RECORD	6672	5819+3304828	23596+3406+062VG0	2252390GC	44+0755+0100+03406
RECORD	6673	5820	23597-5033+121P		+018-002+00412
RECORD	6674	5821+6401894	23598+6452+075VK0	2252720CI18,3164+012+	046-00211
RECORD	6675	5822+4404549	23599+4507+076VP6	2252910	+00612